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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,036	10/21/2003	Hiroshi Teramoto	086142-0569	2968
22428	7590	08/24/2006	EXAMINER	
FOLEY AND LARDNER LLP			BROWN, DREW J	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			3616	

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/689,036	Applicant(s) TERAMOTO ET AL.	
	Examiner Drew J. Brown	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/9/06 (amendment after final).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed on 8/9/06. Claims 1-8 and 21 have been canceled. The finality of the last Office Action is withdrawn in view of the new rejections below.

Claim Objections

1. Claims 9 and 20 objected to because of the following informalities: In lines 4 and 5 of claim 9 and line 12 of claim 20, reference is made to a "tube." However, "tube" should be replaced with --pipe-- in order to stay consistent. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9-14, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Loughlin et al. (U.S. Pat. No. 5,794,973).

O'Loughlin et al. discloses an elongated pipe (702) containing a prepressurized (column 3, lines 20-26) inert gas (column 3, line 25), wherein the elongated pipe comprises a circumferential surface and two opposite ends (Figure 10). Igniters (800, 834) are positioned at the opposite ends of the tube (Figure 10), wherein the elongated tube contains a plurality of spaced apart openings (762, 772) at a plurality of different distances from one of the ends of the pipe along the circumferential surface of the pipe (Figure 11), wherein the openings covered by a rupturable seal (780, 782) until the inert gas reaches a predetermined pressure. A gas inlet (820) is provided for charging the inert gas into the pipe, wherein the gas inlet is sealed by ball welding (822). A pair of caps (722, 724) cover each of the igniters, and each cap contains booster propellant (812, 842).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Loughlin et al.

O'Loughlin et al. also does not disclose that a caulking material seals the ends of the pipe. However, it is conventional in the art to use a caulking material to create a watertight or airtight seal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of O'Loughlin et al. to seal the ends of the pipe with a caulking material so the pressures of each side of the airbag near the corresponding igniters are the same so the airbag inflates uniformly.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Loughlin et al.

O'Loughlin et al. (Figure 10) discloses the claimed invention as discussed above but does not disclose that the tube is curved along its length.

However, Figure 15 of O'Loughlin et al. does disclose that the tube is curved along its length. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of O'Loughlin et al. (Figure 10) in view of the teachings of Figure 15 of O'Loughlin et al. to curve the tube in order to conform to space restrictions within the vehicle.

7. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (U.S. Pat. No. 6,846,013 B2) in view of O'Loughlin et al.

Smith discloses an airbag positioned to inflate along an interior side of a vehicle, a pipe (12) comprising a circumferential surface, two ends, and a sealed opening at each end, wherein the pipe extends in a longitudinal direction of the vehicle along an upper part of the airbag and is

Art Unit: 3616

configured to conform to the shape of the upper part of the airbag (Figure 1), wherein the length of the pipe substantially corresponds to the length of the airbag in the longitudinal direction of the vehicle (Figure 1). A plurality of gas outflow openings (16) in the pipe are positioned at a plurality of different distances from one of the ends of the pipe along the circumferential surface of the pipe (Figure 11) to allow the pressurized gas to enter and inflate the airbag (Figure 2A). Smith also discloses an inflation device, wherein the initiator can receive a triggering signal from a control device when the occurrence of a vehicle collision is detected by a sensor (column 6, lines 1-7).

Smith does not disclose that the pipe is filled with pressurized gas, that the outflow openings are sealed until the pressurized gas reaches a predetermined pressure, and that a pair of inflation devices is connected to the ends of the pipe, each having an initiator and a booster propellant.

O'Loughlin et al., however, does disclose a pipe (702) containing a pressurized (column 3, lines 20-26) gas, sealed (780, 782) outlet openings (762, 772), and a pair of inflation devices (800, 834) connected to the ends of the tube (Figure 10), wherein each inflation device includes an initiator and a booster propellant (812, 842) for producing an exhaust gas for further pressurizing the pressurized gas.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Smith in view of the teachings of O'Loughlin et al. to have pressurized gas fill the pipe in order to allow proper mixing of the gases once the initiator receives the signal to inflate the airbag. It would have been obvious to seal the outflow openings in order to control when the gas leaves the outflow openings so the airbag inflates as desired to provided optimal protection for the occupant in the event of a collision. Finally, it would have also been obvious to have a pair of inflation devices so that the inflation gas exits each side of the pipe uniformly, in order to prevent one side of the airbag from inflating before the other end and risking inadequate protection for the occupant.

Response to Arguments

8. Applicant's arguments with respect to claims 9 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Drew J. Brown
Examiner
Art Unit 3616

db
8/21/06



DAVID R. DUNN
PRIMARY EXAMINER